





**W**ith economic pressures restricting campus budgets and healthcare policy issues capturing national attention, facilities managers at university-affiliated hospitals and other healthcare entities say they feel more urgency than ever to provide cost-effective services to patients, providers, medical researchers, and students.

Managing facilities at a university-related medical center is, in many ways, much like doing it on an academic campus—except in the many ways it isn’t, and that’s what makes their positions as facilities directors at major medical institutions particularly challenging. But it is also exciting, according to several APPA members who hold those positions.

# THE LIFE-AND-DEATH FACTOR FOCUSING ON HEALTHCARE FACILITIES

“Life and death,” literally, is how they describe the principal difference between their management responsibilities at medical and non-medical facilities. “If a chiller fails at a medical or vivarium facility, it can be a life-and-death situation, while at a non-medical facility it could just mean folks are uncomfortable for a while,” says John C. Malmrose, chief facilities officer at the Medical University of South Carolina (MUSC).

Similarly, he says, while repairs of an after-hours elevator or power outage could probably wait until the next day at a non-medical facility, there is no waiting in a hospital. “We deal with the same issues as the rest of the university. The big difference is that there is a heightened sensitivity when everything doesn’t run perfectly,” Malmrose says.

BY ALAN DESSOFF

"The hospital component is huge. You have patients on life support who rely on the facilities to be as close to perfect as possible. There are tensions and details necessary to make that happen. It's a whole different mindset and level of intensity and accountability and risk," says Gary Kittell, director of physical plant at the Upstate Medical University in New York.

"If the lights go off on an academic campus, everybody says, 'Well, we're going to get them back on as soon as we can.' If they go off in a medical facility, it's not tolerable. There is an extra burden to ensure that there are no glitches related to all the building systems essential for patient care," adds William A. Daigneau, vice president for operations and facilities management at the University of Texas M.D. Anderson Cancer Center.

To keep systems operational, there are backups for everything at his facility, Daigneau says, including electricity, water and sewers, and "all sorts of testing requirements." Emergency generators get monthly full-load tests. "We don't just run them, we actually switch over and demonstrate that they can take their full load," Daigneau explains. M.D. Anderson also has on-site water storage, and sewer systems have valving to prevent sewer backups. "You can't have contaminants coming back into the facility," Daigneau says.

Even when facilities have to be shut down for utility repairs, "you have to make accommodations for them, because unlike someone on a regular campus who maybe won't get a hot meal or a warm shower that day, patients' lives can be at risk," says Kittell.

#### NO DOWNTIME ALLOWED

Compared to an academic campus, where students move in at the beginning of the school year and out at the end, "new patients move into our rooms every five or six days and the rooms need to be ready for them," he continues. With the emergency department, operating rooms, and other units all operating around the clock, "you have to be absolutely on top of your game," he declares.

In patient care, "there is no downtime allowed," agrees Donald Rau, director of facilities management at the University of Kansas Medical Center (KUMC). "If a



**Upstate Medical University**, formerly SUNY Health Science Center, in Syracuse, N.Y., is a campus of 2.6 million square feet of managed facilities, half academic and half clinical, including a university hospital and health-care center and colleges of graduate studies, health professions, medicine, and nursing. Its energy consumption is 1 trillion Btus annually. Its 6,570 total employees include 185 in facilities management.

**Gary Kittell**, director of physical plant, previously held positions in facilities management and engineering at facilities in Utah and New York. He holds a B.S. in civil engineering from the University of Vermont and is a licensed professional engineer in Vermont and New York. He also has healthcare facility manager certification from the American Hospital Association.

patient is in a room and there is no air conditioning in the summer or heat in the winter, it can get pretty bad. You have to respond right away and prevent as many things from happening to those patients as you can."

#### ALWAYS ON YOUR TOES

At the same time, he adds, "If you're around patients, you have to be courteous," because how patients score their level of satisfaction with a facility is "extremely critical" in the intense competition among hospitals in an area.

Rigid oversight by accreditation agencies and government regulatory authorities helps ensure that their facilities are operating efficiently and effectively but also keeps them on their toes, these facilities professionals agree. They cite the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), the

key accrediting body for hospitals nationwide. "They are pretty unforgiving. They can come at any time, and you have to be on your game," says Kittell of the Upstate Medical University.

"If you have a large facility like ours, they not only inspect the medical part of it but they bring along a 'life safety' specialist who goes through all your records, from generator testing to firewall locations to preventive maintenance. Then they spend a day or more touring the facility, looking above the ceilings, checking to make sure everything is as it should be. No areas are out of bounds," Kittell says.



**The Medical University of South Carolina**, in Charleston, the state's only comprehensive academic medical center, encompasses 7 million square feet divided equally into clinical, research/academics, and auxiliary functions, including a 709-bed hospital and six colleges. It uses about 1 trillion Btus annually and maintains a facilities management staff of about 300.

**John C. Malmrose** joined MUSC in 1998 as assistant director of engineering and became chief facilities officer in 2001. He is a registered professional engineer with more than 30 years of design, construction, and facilities management experience. He is a graduate of the United States Coast Guard Academy and holds a master's degree in civil engineering from the University of Illinois at Urbana/Champaign. He currently serves as president of SRAPPA.

"The Joint Commission is taking a much more aggressive approach. It drives you to a state of constant preparedness for a visit, which I think is a good thing," adds Skai Dancey, director of facilities operations at Oregon Health Sciences University (OHSU). Other accreditation bodies important to healthcare facilities, particularly those with research units, include the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC).

JCAHO and AAALAC "expect strict compliance with policies and procedures" and that can make a difference between accreditation and probation, says MUSC's Malmrose.

#### SAFETY AND QUALITY

In addition to accreditors, "we have regulatory agencies that a regular campus wouldn't have," adds Mark Kenneday, vice chancellor for campus operations at the



The University of Arkansas for Medical Sciences, in Little Rock, the state's only academic health center, occupies 3.6 million square feet that include a 373-bed hospital plus six colleges of nursing, medicine, health-related professions, pharmacy, and public health, as well as a graduate school. It has a \$15 million utility budget and its 10,000 employees include 360 for facilities management.

Mark Kenneday, vice chancellor for campus operations since 2008, previously was director of building care and operations at the University of Texas M.D. Anderson Cancer Center. He has a healthcare facilities manager certification from the American Hospital Association. He received a bachelor's degree in civil engineering and construction management and a master's degree in business administration, both from the University of Houston.

While facilities related to patient care get much of their attention, facilities officers also are responsible for other aspects of their

University of Arkansas for Medical Sciences (UAMS). He cites a recent visit by nuclear regulators who were "looking at how we take care of our isotopes. There's always someone who has an interest in ensuring that we are being safe."

"The patient care adds another level of regulatory oversight that can be challenging," agrees Dancey, but can "drive us to a higher level of quality." But in other ways, he adds, complying with the regulations can lead to increased costs, which can be a hard sell to other administrators who keep a close eye on budgets.

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campuses. "I find it hard not to sink all my attention into the hospital, but I also have to actively make sure that I'm looking out for our academic side, too, so that it doesn't run on autopilot," asserts Dancey.

## SIMILAR ISSUES FOR ANIMAL HEALTHCARE

Even healthcare facilities where four-legged creatures are patients and research subjects require intense management. "Our hospital runs 24/7, every day of the year, and we have to maintain the temperatures and keep the water running and the lights on," says Christopher J. Phillips, director of facilities management at the University of Pennsylvania School of Veterinary Medicine.

He also maintains facilities for animals used in research and "if I don't protect those lives, the research stops," Phillips says.

"I have a hard time making clear even inside the university that just because it's a vet school, it's still a healthcare facility. Sometimes the university doesn't see that," Phillips states. "If the university is shut down and students are sent home for some reason, like swine flu, I still have to keep this facility up and running. We're not going to shut down. We're dealing with lives, and if we don't keep a building up and running, we are in jeopardy of losing a life. It's an animal's life, but it could be just as meaningful to somebody as losing a mother or father."

Similarly, while accreditation of his facility is not at "the same high standard" of a hospital for humans, "if I don't keep that accreditation, they're liable to shut the door," Phillips says.

## INNOVATIONS DESPITE THE CHALLENGES

Facilities officers at healthcare facilities say they face many challenges. A key one is related to the economy. "Money is tight, and that translates into staffing reductions. But the demands of the campus haven't changed. So the challenge is to meet facility needs with significantly reduced funding. How do we do it?" says Malmrose.

One way he is doing it, he says, is with technology "to help us manage our work," including software that allows for mobile work order management and another software solution that eliminates duplicate databases. "That should make us more effective and efficient," Malmrose says.

"We're cutting out a lot of services, but we're trying hard to keep our preventive



**The University of Pennsylvania School of Veterinary Medicine**, in Philadelphia, the only veterinary school in the state, covers 2 million square feet equally divided for academics, research, and animal care, with a 150-bed hospital. In addition to the university's main facilities management group of 300, a team of nine is dedicated to facilities at Penn Vet.

**Christopher J. Phillips**, director of operations at Penn Vet for four years, earned a bachelor's degree in business at Pennsylvania State University and previously worked in HVAC service.

maintenance strong. That's a priority because we think it pays off in the long run," he adds.

OHSU's Dancey agrees that economic challenges "top the list." He cites rising energy costs. "We're doing a lot to reduce our consumption and spend in that area," he says. Rau of KUMC says lack of funding is holding back about \$70 million of deferred maintenance on campus buildings that are 45 years old on average. "All the basic infrastructure is shot," he says.

On Kittell's Upstate New York campus, a major construction program is underway, funded by state bonds, that includes several new buildings and renovations of older ones. "Making sure we're able to ser-

vice them at the standards that are necessary is going to be pretty demanding," he says. "The economy is impacting operations."

On all healthcare campuses, facilities officers say it's important keep up with professional development for themselves and their staffs. "We have put together a training matrix that we try to track," says Malmrose. In addition to in-house training, employees often take outside courses and attend seminars in their specialties. "It depends on the certification requirements," he says.

Daigneau of M.D. Anderson says that plumbers on his staff have to be certified to work on medical gas systems. He notes that health departments and some professional associations offer specific training programs in environmental health and safety, like testing water systems for Legionnaire's Disease. Infection control in hospitals remains "a major issue," he says.

The American Society for Healthcare Engineering (ASHE) offers programs that "a number of our people attend to stay updated on requirements for Joint Commission accredita-

**The Oregon Health Sciences University**, in Portland, occupies 5.3 million square feet, with 2 million for healthcare, including a 500-bed hospital, and the rest for academic and administrative uses. It spends \$19 million annually on energy. The total staff of 11,000 includes a basic facility team of 110.

**Skai Dancey**, director of facilities operations since 2006, previously was a mechanical engineer and engineering manager. He earned a bachelor's degree in mechanical engineering from Oregon State University and a master's in business administration from Portland State University.



tion," Daigneau adds. Facilities officers also cite APPA and the International Facility Management Association (IFMA) and report that local technical colleges often are good professional development providers.

## LESSONS LEARNED

Given the responsibilities and accompanying stresses of their jobs, facilities officers at university-affiliated healthcare institutions say they have learned lessons about how to do their jobs well. "If you're going to be effective at this," says Kittell, "you have to think well beyond the facilities box, because there are a lot of sophisticated people in the various aspects of medicine, and they need to be advised about facility situations that impact their care of patients." That means, Kittell explains, "being able to talk to them in terms they understand, and translate facility-speak to medical-speak and back-and-forth."

The facilities officers say they also gain satisfactions that balance the demands of their positions. "Nobody really sees us unless there is something that isn't getting done. But it's very rewarding knowing that we are helping patients and doctors and researchers," says Rau.

**The University of Texas M.D. Anderson Cancer Center**, in Houston, is one of the world's largest cancer centers. The physical plant of 11 million square feet includes a 507-bed hospital as well as ambulatory care, research, educational, and auxiliary facilities. Utility bills total about \$65 million annually. Its 17,000 total employees include 1,700 in facilities management.

**William A. Daigneau**, vice president for operations and facilities management, who joined M.D. Anderson in 1994, has served as chief facilities officer for two major research universities, a comprehensive doctoral university, and a public university system component. An engineering graduate of Case Western Reserve University, he earned an MBA from Bradley University and has completed doctoral level work in organizational behavior at the University of Iowa. He is also an APPA Fellow.



"I've worked both sides of the house," says Daigneau, "and the thing I enjoy about healthcare is that it's a focused mission. Higher education has a pretty diverse and sometimes diffused mission of what it is trying to accomplish, but in a healthcare environment, everybody works toward the same goal. It's enjoyable to work in that environment." ☈

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